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NOV 27 2000

TECH CENTER 1600/2900

## SEQUENCE LISTING

<110> Lucbe, Ralf M.  
Wei, Bo

<120> DSP-3 DUAL-SPECIFICITY PHOSPHATASE

<130> 200125.408

<140> US/09/544,525

<141> 2000-04-06

<160> 18

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 875

<212> DNA

<213> Homo sapiens

<400> 1

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gctagcggtc gccttcagcc accatgggga atgggatgaa caagatcctg cccggcctgt 120  
acatcggaac cttcaaagat gccagagacg cggaacaatt gagcaagaac aaggtgacac 180  
atattctgtc tgtccacgat agtccagggc tatgttggag gacaagacat ttcaaagaaa 240  
gtattaaatt cattcacgag tgccgggtcc gcggtgagag ctgcccttga cactgcttgg 300  
ccgggggttc caggaggggtg aacttggtga tcgcatacat catgaccgtc actgactttg 360  
gctgggagga tgccctgcac accgtgcgtg ccgggagatc ctgtgccaac cccaacgtgg 420  
gcttccagag acagctccag gagtttgaga atcatgaggt ccatcagtat cggcagtggc 480  
tgaaggaaga atattgagag agccctttgc aggatgcaga agaagccaaa aacattctgg 540  
ccgctccagg aattctgaag ttctgggcct ttctcagaag actgtaatgt acctgaagtt 600  
tctgaaatat tgcaaaccgc cagagtttag gctgggtgctg ccaaaaagaa aagcaacata 660  
gagtttaagt atccagtagt gatttgtaaa cttgtttttc atttgaagct gaatatatac 720  
gtagtcatgt ttatgttgag aactaaggat attcttagc aagagaaaat attttccctt 780  
tatccccact gctgtggagg ttctgtacc tcgcttggat gcctgtaagg atcccgggag 840  
ccttgccgca ctgccttgtg ggtggcttgg cgctc 875

<210> 2

<211> 167

<212> PRT

<213> Homo sapiens

<400> 2

Met Gly Asn Gly Met Asn Lys Ile Leu Pro Gly Leu Tyr Ile Gly Asn  
1 5 10 15  
Phe Lys Asp Ala Arg Asp Ala Glu Gln Leu Ser Lys Asn Lys Val Thr  
20 25 30  
His Ile Leu Ser Val His Asp Ser Pro Gly Leu Cys Trp Arg Thr Arg  
35 40 45  
His Phe Lys Glu Ser Ile Lys Phe Ile His Glu Cys Arg Leu Arg Gly

50                      55                      60  
 Glu Ser Cys Leu Val His Cys Leu Ala Gly Val Ser Arg Ser Val Thr  
 65                      70                      75                      80  
 Leu Val Ile Ala Tyr Ile Met Thr Val Thr Asp Phe Gly Trp Glu Asp  
                     85                      90                      95  
 Ala Leu His Thr Val Arg Ala Gly Arg Ser Cys Ala Asn Pro Asn Val  
                     100                      105                      110  
 Gly Phe Gln Arg Gln Leu Gln Glu Phe Glu Lys His Glu Val His Gln  
                     115                      120                      125  
 Tyr Arg Gln Trp Leu Lys Glu Glu Tyr Gly Glu Ser Pro Leu Gln Asp  
                     130                      135                      140  
 Ala Glu Glu Ala Lys Asn Ile Leu Ala Ala Pro Gly Ile Leu Lys Phe  
 145                      150                      155                      160  
 Trp Ala Phe Leu Arg Arg Leu  
                     165

<210> 3  
 <211> 10  
 <212> PRT  
 <213> Homo sapien

<400> 3  
 Val His Cys Leu Ala Gly Val Ser Arg Ser  
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<210> 4  
 <211> 23  
 <212> PRT  
 <213> Homo sapien

<400> 4  
 Gly Arg Val Leu Val His Cys Gln Ala Gly Ile Ser Arg Ser Gly Thr  
 1                      5                      10                      15  
 Asn Ile Leu Ala Tyr Leu Met  
                     20

<210> 5  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer used to obtain full length cDNA encoding  
 DSP-3

<400> 5  
 gacctcatgc ttctcaaact cctg

<210> 6  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Primer used to obtain full length cDNA encoding  
DSP-3

<400> 6  
cgatcaccag tctcacgctc c

21

<210> 7  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer used to obtain full length cDNA encoding  
DSP-3

<400> 7  
cagaatatgt gtcaccttgt tcttgc

26

<210> 8  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer used to obtain full length cDNA encoding  
DSP-3

<400> 8  
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26

<210> 9  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer used to obtain full length cDNA encoding  
DSP-3

<400> 9  
gggaatggga tgaacaagat cctgcccg

28

<210> 10  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer used to obtain full length cDNA encoding  
DSP-3

<400> 10  
cagtcttctg agaaaggccc agaacttcag aattcct

37

Sub  
D1  
cont

a!  
Cont

<210> 11  
 <211> 170  
 <212> PRT  
 <213> Homo sapiens

<400> 11  
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 1 5 10 15  
 Pro Leu Ser Asn Ser Gln Pro Ser Phe Pro Val Glu Ile Leu Pro Phe  
 20 25 30  
 Leu Tyr Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Glu  
 35 40 45  
 Glu Phe Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn  
 50 55 60  
 Leu Phe Glu Asn Ala Gly Glu Phe Lys Tyr Lys Gln Ile Pro Ile Ser  
 65 70 75 80  
 Asp His Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser  
 85 90 95  
 Phe Ile Asp Glu Ala Arg Gly Lys Asn Cys Gly Val Leu Val His Cys  
 100 105 110  
 Leu Ala Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met  
 115 120 125  
 Gln Lys Leu Asn Leu Ser Met Asn Asp Ala Tyr Asp Ile Val Lys Met  
 130 135 140  
 Lys Lys Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu  
 145 150 155 160  
 Asp Phe Glu Arg Thr Leu Gly Leu Ser Ser  
 165 170

<210> 12  
 <211> 168  
 <212> PRT  
 <213> Homo sapiens

<400> 12  
 Asp Arg Glu Leu Pro Ser Ser Ala Thr Glu Ser Asp Gly Ser Pro Val  
 1 5 10 15  
 Pro Ser Ser Gln Pro Ala Phe Pro Val Gln Ile Leu Pro Tyr Leu Tyr  
 20 25 30  
 Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Gly Lys Tyr  
 35 40 45  
 Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn Ala Phe  
 50 55 60  
 Glu His Gly Gly Glu Phe Thr Tyr Lys Gln Ile Pro Ile Ser Asp His  
 65 70 75 80  
 Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser Phe Ile  
 85 90 95  
 Asp Glu Ala Arg Ser Lys Lys Cys Gly Val Leu Val His Cys Leu Ala  
 100 105 110  
 Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met Gln Lys  
 115 120 125  
 Met Asn Leu Ser Leu Asn Asp Ala Tyr Asp Phe Val Lys Arg Lys Lys  
 130 135 140  
 Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu Asp Phe

See  
 211  
 Cont

145                      150                      155                      160  
 Glu Arg Thr Leu Gly Leu Ser Ser  
                                  165

<210> 13  
 <211> 168  
 <212> PRT  
 <213> Homo sapiens

<400> 13  
 Pro Ala Gln Ala Leu Pro Pro Ala Gly Ala Glu Asn Ser Asn Ser Asp  
   1                  5                  10                  15  
 Pro Arg Val Pro Ile Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro  
           20                  25                  30  
 Tyr Leu Tyr Leu Gly Ser Cys Asn His Ser Ser Asp Leu Gln Gly Leu  
           35                  40                  45  
 Gln Ala Cys Gly Ile Thr Ala Val Leu Asn Val Ser Ala Ser Cys Pro  
   50                  55                  60  
 Asn His Phe Glu Gly Leu Phe His Tyr Lys Ser Ile Pro Val Glu Asp  
  65                  70                  75                  80  
 Asn Gln Met Val Glu Ile Ser Ala Trp Phe Gln Glu Ala Ile Ser Phe  
           85                  90                  95  
 Ile Asp Ser Val Lys Asn Ser Gly Gly Arg Val Leu Val His Cys Gln  
          100                 105                 110  
 Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Ile Gln  
          115                 120                 125  
 Ser His Arg Val Arg Leu Asp Glu Ala Phe Asp Phe Val Lys Gln Arg  
  130                 135                 140  
 Arg Gly Val Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln  
  145                 150                 155                 160  
 Leu Glu Thr Gln Val Leu Cys His  
                                  165

<210> 14  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
 Pro Leu Ser Thr Ser Val Pro Asp Ser Ala Glu Ser Gly Cys Ser Ser  
   1                  5                  10                  15  
 Cys Ser Thr Pro Leu Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro  
           20                  25                  30  
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Arg Lys Asp Met Leu  
           35                  40                  45  
 Asp Ala Leu Gly Ile Thr Ala Leu Ile Asn Val Ser Ala Asn Cys Pro  
   50                  55                  60  
 Asn His Phe Glu Gly His Tyr Gln Tyr Lys Ser Ile Pro Val Glu Asp  
  65                  70                  75                  80  
 Asn His Lys Ala Asp Ile Ser Ser Trp Phe Asn Glu Ala Ile Asp Phe  
           85                  90                  95  
 Ile Asp Ser Ile Lys Asn Ala Gly Gly Arg Val Phe Val His Cys Gln  
          100                 105                 110  
 Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Arg

*Sub  
 Dist  
 Cont*

115 120 125  
 Thr Asn Arg Val Lys Leu Asp Glu Ala Phe Glu Phe Val Lys Gln Arg  
 130 135 140  
 Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln  
 145 150 155 160  
 Phe Glu Ser Gln Val Leu Ala Pro His  
 165

<210> 15  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 15  
 Pro Val Pro Pro Ser Ala Thr Glu Pro Leu Asp Leu Gly Cys Ser Ser  
 1 5 10 15  
 Cys Gly Thr Pro Leu His Asp Gln Gly Gly Pro Val Glu Ile Leu Pro  
 20 25 30  
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ala Arg Arg Asp Met Leu  
 35 40 45  
 Asp Ala Leu Gly Ile Thr Ala Leu Leu Asn Val Ser Ser Asp Cys Pro  
 50 55 60  
 Asn His Phe Glu Gly His Tyr Gln Tyr Lys Cys Ile Pro Val Glu Asp  
 65 70 75 80  
 Asn His Lys Ala Asp Ile Ser Ser Trp Phe Met Glu Ala Ile Glu Tyr  
 85 90 95  
 Ile Asp Ala Val Lys Asp Cys Arg Gly Arg Val Leu Val His Cys Gln  
 100 105 110  
 Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Met  
 115 120 125  
 Lys Lys Arg Val Arg Leu Glu Ala Phe Glu Phe Val Lys Gln Arg  
 130 135 140  
 Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln  
 145 150 155 160  
 Phe Glu Ser Gln Val Leu Ala Thr Ser  
 165

<210> 16  
 <211> 171  
 <212> PRT  
 <213> Homo sapiens

<400> 16  
 Ser Glu Arg Ala Leu Ile Ser Gln Cys Gly Lys Pro Val Val Asn Val  
 1 5 10 15  
 Ser Tyr Arg Pro Ala Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro  
 20 25 30  
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Lys Cys Glu Phe Leu  
 35 40 45  
 Ala Asn Leu His Ile Thr Ala Leu Leu Asn Val Ser Arg Arg Thr Ser  
 50 55 60  
 Glu Ala Cys Met Thr His Leu His Tyr Lys Trp Ile Pro Val Glu Asp  
 65 70 75 80  
 Ser His Thr Ala Asp Ile Ser Ser His Phe Gln Glu Ala Ile Asp Phe

See  
 Df  
 cont  
 a  
 cont

Ile	Asp	Cys	Val	Arg	Glu	Lys	Gly	Gly	Lys	Val	Leu	Val	His	Cys	Glu
			100					105					110		
Ala	Gly	Ile	Ser	Arg	Ser	Pro	Thr	Ile	Cys	Met	Ala	Tyr	Leu	Met	Lys
		115					120					125			
Thr	Lys	Gln	Phe	Arg	Leu	Lys	Glu	Ala	Phe	Asp	Tyr	Ile	Lys	Gln	Arg
	130					135					140				
Arg	Ser	Met	Val	Ser	Pro	Asn	Phe	Gly	Phe	Met	Gly	Gln	Leu	Leu	Gln
145					150					155					160
Tyr	Glu	Ser	Glu	Ile	Leu	Pro	Ser	Thr	Pro	Asn					
			165						170						

<210> 17  
 <211> 149  
 <212> PRT  
 <213> Homo sapiens

<400> 17

Val	Pro	Ser	Val	Gly	Leu	Thr	Arg	Ile	Leu	Pro	His	Leu	Tyr	Leu	Gly
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Ser	Gln	Lys	Asp	Val	Leu	Asn	Lys	Asp	Leu	Met	Thr	Gln	Asn	Gly	Ile
		20					25					30			
Ser	Tyr	Val	Leu	Asn	Ala	Ser	Asn	Ser	Cys	Pro	Lys	Pro	Asp	Phe	Ile
	35				40						45				
Cys	Glu	Ser	Arg	Phe	Met	Arg	Val	Pro	Ile	Asn	Asp	Asn	Tyr	Cys	Glu
50					55					60					
Lys	Leu	Leu	Pro	Trp	Leu	Asp	Lys	Ser	Ile	Glu	Phe	Ile	Asp	Lys	Ala
65				70					75					80	
Lys	Leu	Ser	Ser	Cys	Gln	Val	Ile	Val	His	Cys	Leu	Ala	Gly	Ile	Ser
			85					90					95		
Arg	Ser	Ala	Thr	Ile	Ala	Ile	Ala	Tyr	Ile	Met	Lys	Thr	Met	Gly	Met
		100					105					110			
Ser	Ser	Asp	Asp	Ala	Tyr	Arg	Phe	Val	Lys	Asp	Arg	Arg	Pro	Ser	Ile
	115					120					125				
Ser	Pro	Asn	Phe	Asn	Phe	Leu	Gly	Gln	Leu	Leu	Glu	Tyr	Glu	Arg	Thr
130					135						140				
Leu	Lys	Leu	Leu	Ala											
145															

<210> 18  
 <211> 127  
 <212> PRT  
 <213> Homo sapiens

<400> 18

Met	Gly	Asn	Gly	Met	Lys	Ile	Leu	Pro	Gly	Leu	Tyr	Ile	Gly	Asn	Phe
1				5					10					15	
Lys	Asp	Ala	Arg	Asp	Ala	Glu	Gln	Leu	Ser	Lys	Asn	Lys	Val	Thr	His
		20					25					30			
Ile	Leu	Ser	Val	His	Asp	Ser	Pro	Gly	Leu	Cys	Trp	Arg	Thr	Arg	His
	35				40						45				
Phe	Lys	Glu	Ser	Ile	Lys	Phe	Ile	His	Glu	Cys	Arg	Leu	Arg	Gly	Glu
50					55					60					
Ser	Cys	Leu	Val	His	Cys	Leu	Ala	Gly	Val	Ser	Arg	Ser	Val	Ile	Leu

See  
 DI  
 cont  
 A1  
 Cont

65                      70                      75                      80  
 Val Ile Ala Tyr Ile Met Thr Val Ile Asp Phe Gly Trp Glu Asp Ala  
                                  85                      90                      95  
 Leu His Thr Val Arg Ala Gly Arg Ser Cys Ala Asn Pro Asn Val Gly  
                                  100                      105                      110  
 Phe Gln Arg Gln Leu Gln Glu Phe Glu Lys His Glu Val His Gln  
                                  115                      120                      125

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a'  
 ant  
 subs  
 D